

02/11/97 02:53 PM

COMPARE2.WK4

**TFPRP- Rev=Cost
Local & Toll**

TFPRP-7	1988	1989	1990
Cost			
Capital	26,866,208,000	25,845,853,000	25,584,541,000
Labor	18,669,882,000	18,647,357,000	18,998,366,000
MRS	14,492,320,000	16,093,355,000	16,614,863,000
TOTAL	60,028,410,000	60,586,565,000	61,197,770,000
		0.93%	1.00%

Average of Shares

Capital	0.3245	0.2881
Labor	0.2814	0.2832
MRS	0.3941	0.4287
	1.00	1.00

Quantity Growth

Capital	4.84%	2.94%
Labor	-1.33%	-3.94%
MRS	-1.78%	12.29%

Total Input Quantity

0.50% 5.00%

Price Growth

Capital	-8.71%	-3.96%
Labor	1.20%	5.80%
MRS	12.26%	-9.10%

Total Input Price

0.43% -4.00%

02/11/97 02:53 PM

COMPARE2.WK4

TFPRP- Rev=Cost

Local & Toll

TFPRP-7	1988	1989	1990
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OUTPUT

TFPRP-7

BOOKED REVENUES	1988	1989	1990
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Local	29,226,988,000	29,973,157,000	30,699,085,000
Intrastate Access	4,326,751,000	4,318,962,000	4,436,737,000
Toll	10,668,223,000	10,549,257,000	10,577,992,000
Interstate End User	3,604,221,000	4,398,692,000	4,679,142,000
Interstate Switched	9,662,529,000	9,092,575,000	8,595,750,000
Interstate Special	2,539,698,000	2,253,922,000	2,209,064,000
Miscellaneous	0	0	0

Total	60,028,410,000	60,586,565,000	61,197,770,000
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Average of Shares

Local	0.491	0.498
Intrastate Access	0.000	0.000
Toll	0.248	0.245
Interstate End User	0.066	0.075
Interstate Switched	0.156	0.145
Interstate Special	0.040	0.037
Miscellaneous	0.000	0.000

Total	1.000	1.000
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Price Indexes

Local	1.0000	0.9754	0.9472
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02/11/97 02:53 PM

COMPARE2.WK4

TFPRP- Rev=Cost

Local & Toll

TFPRP-7	1988	1989	1990
Intrastate Access	1.0000	1.0017	0.9840
Toll	1.0000	0.9839	0.9662
Interstate End User	1.0000	1.1785	1.2256
Interstate Switched	1.0000	0.8567	0.7518
Interstate Special	1.0000	0.9237	0.9139
Miscellaneous	1.0000	1.0450	1.0924

Quantity Indexes

Local	318724185	330212045	342403841
Intrastate Access	0	0	0
Toll	61828434	67174808	74183251
Interstate End User	3,604,221,000	3,732,510,386	3,817,860,249
Interstate Switched	9,662,529,000	10,613,953,576	11,433,441,661
Interstate Special	2,539,698,000	2,440,180,007	2,417,101,020
Miscellaneous	0	0	0

Quantity Growth	1988	1989	1990
Local		3.54%	3.63%
Intrastate Access		0	0
Toll		8.29%	9.92%
Interstate End User		3.50%	2.26%
Interstate Switched		9.39%	7.44%
Interstate Special		-4.00%	-0.95%
Miscellaneous		0	0

TOTAL OUTPUT		5.32%	5.46%
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**TFPRP- Rev=Cost
Local & Toll**

TFPRP-7	1991	1992	1993	1994	Avg 88-94	Avg 89-94
Cost						
Capital	24,641,357,000	26,477,138,000	26,858,104,000	26,303,835,000		
Labor	19,576,237,000	19,862,205,000	21,027,726,000	21,625,328,000		
MRS	17,825,034,000	17,013,535,000	17,551,114,000	19,286,027,000		
TOTAL	62,042,628,000	63,352,878,000	65,436,944,000	67,215,190,000		
	1.37%	2.09%	3.24%	2.68%	1.9%	2.1%
Average of Shares						
Capital	0.2469	0.2486	0.2701	0.2768		
Labor	0.2829	0.2746	0.2726	0.2648		
MRS	0.4702	0.4768	0.4573	0.4584		
	1.00	1.00	1.00	1.00		
Quantity Growth						
Capital	3.32%	2.83%	2.84%	2.67%	3.2%	2.9%
Labor	-6.66%	-1.27%	-4.02%	-7.56%	-4.1%	-4.7%
MRS	2.88%	-0.94%	-5.29%	8.37%	2.6%	3.5%
Total Input Quantity	0.29%	-0.09%	-2.75%	2.57%	0.9%	1.0%
Price Growth						
Capital	-7.07%	4.35%	-1.41%	-4.76%	-3.6%	-2.6%
Labor	9.66%	2.72%	9.72%	10.36%	6.6%	7.7%
MRS	4.15%	-3.72%	8.41%	1.06%	2.2%	0.2%
Total Input Price	1.08%	2.18%	5.99%	0.11%	1.0%	1.1%

TFPRP- Rev=Cost**Local & Toll**

TFPRP-7	1988	1989	1990
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TFP AND X FACTOR**Local & Toll**

TFP Growth		4.83%	0.45%
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US TFP Growth		-0.26%	-0.21%
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TFP Differential		5.09%	0.67%
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Input Price Growth		0.43%	-4.00%
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US Input Price Growth		4.14%	4.22%
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Input Price Differential		-3.71%	-8.22%
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X Factor		8.80%	8.89%
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Summary

1988-94

1988-94

1988-94

Local & Toll

Misc Output

Difference

Total Output	4.8%	3.8%	0.9%
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Total Input	0.9%	0.9%	0.0%
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LEC TFP	3.8%	2.9%	0.9%
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TFP Differential	3.6%	2.7%	0.9%
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LEC Input Price	1.0%	1.0%	0.0%
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Input Price Differential	-2.8%	-2.8%	0.0%
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X Factor	6.5%	5.5%	0.9%
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**TFPRP- Rev=Cost
Local & Toll**

TFPRP-7	1991	1992	1993	1994	Avg 88-94	Avg 89-94
Intrastate Access	0.9271	0.9067	0.8803	0.8459		
Toll	0.9350	0.9189	0.9031	0.8881		
Interstate End User	1.2231	1.2385	1.2709	1.3183		
Interstate Switched	0.7060	0.6772	0.6698	0.6433		
Interstate Special	0.9377	0.9342	0.8759	0.8252		
Miscellaneous	1.1364	1.1724	1.2073	1.2403		

Quantity Indexes

Local	353219571	365468629	376995406	392601075		
Intrastate Access	0	0	0	0		
Toll	79543260	82259907	89192259	97553610		
Interstate End User	3,947,505,177	4,007,359,897	4,126,384,431	4,239,915,072		
Interstate Switched	12,059,934,439	12,773,568,984	13,434,635,676	14,446,356,006		
Interstate Special	2,259,767,067	2,305,143,388	2,395,280,188	2,686,724,569		
Miscellaneous	0	0	0	0		

Quantity Growth	1991	1992	1993	1994	Avg 88-94	Avg 89-94
Local	3.11%	3.41%	3.11%	4.06%	3.5%	3.5%
Intrastate Access	0	0	0	0	0.0%	0.0%
Toll	6.98%	3.36%	8.09%	8.96%	7.6%	7.5%
Interstate End User	3.34%	1.50%	2.93%	2.71%	2.7%	2.5%
Interstate Switched	5.33%	5.75%	5.05%	7.26%	6.7%	6.2%
Interstate Special	-6.73%	1.99%	3.84%	11.48%	0.9%	1.9%
Miscellaneous	0	0	0	0	0	0.0%
TOTAL OUTPUT	4.02%	3.52%	4.49%	5.70%	4.8%	4.6%

TFPRP- Rev=Cost**Local & Toll**

	1991	1992	1993	1994	Avg 88-94	Avg 89-94
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OUTPUT**TFPRP-7****BOOKED REVENUES**

	1991	1992	1993	1994	Avg 88-94	Avg 89-94
Local	32,059,008,000	33,359,990,000	34,598,957,000	35,758,637,000		
Intrastate Access	4,456,237,000	4,506,685,000	4,647,675,000	4,829,192,000		
Toll	10,066,039,000	9,718,496,000	9,849,156,000	9,526,791,000		
Interstate End User	4,828,177,000	4,963,262,000	5,244,094,000	5,589,662,000		
Interstate Switched	8,514,130,000	8,650,880,000	8,999,065,000	9,293,783,000		
Interstate Special	2,119,037,000	2,153,565,000	2,097,997,000	2,217,125,000		
Miscellaneous	0	0	0	0		
Total	62,042,628,000	63,352,878,000	65,436,944,000	67,215,190,000		

Average of Shares

Local	0.509	0.522	0.528	0.530
Intrastate Access	0.000	0.000	0.000	0.000
Toll	0.240	0.229	0.223	0.218
Interstate End User	0.077	0.078	0.079	0.082
Interstate Switched	0.139	0.137	0.137	0.138
Interstate Special	0.035	0.034	0.033	0.033
Miscellaneous	0.000	0.000	0.000	0.000
Total	1.000	1.000	1.000	1.000

Price Indexes

Local	0.9510	0.9486	0.9468	0.9377
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02/11/97 02:53 PM

COMPARE2.WK4

TFPRP- Rev=Cost

Local & Toll

TFPRP-7	1991	1992	1993	1994	Avg 88-94	Avg 89-94
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TFP AND X FACTOR

Local & Toll

TFP Growth	3.73%	3.61%	7.24%	3.12%	3.8%	3.6%
US TFP Growth	-1.04%	1.49%	0.62%	0.60%	0.2%	0.3%
TFP Differential	4.77%	2.13%	6.63%	2.52%	3.6%	3.3%

Input Price Growth	1.08%	2.18%	5.99%	0.11%	1.0%	1.1%
US Input Price Growth	2.91%	4.61%	3.55%	3.29%	3.8%	3.7%
Input Price Differential	-1.83%	-2.43%	2.44%	-3.19%	-2.8%	-2.6%

X Factor	6.60%	4.56%	4.19%	5.71%	6.5%	6.0%
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Summary

	1989-94	1989-94	1989-94
	Local & Toll	Misc Output	Difference
Total Output	4.6%	3.8%	0.9%
Total Input	1.0%	1.0%	0.0%
LEC TFP	3.6%	2.8%	0.9%
TFP Differential	3.3%	2.5%	0.9%
LEC Input Price	1.1%	1.1%	0.0%
Input Price Differential	-2.6%	-2.6%	0.0%
X Factor	6.0%	5.1%	0.9%

TAB K

INTERSTATE ACCESS

02/11/97 02:54 PM

COMPARE2 WK4

TFPRP- Rev=Cost
Interstate Access

TFPRP-7	1988	1989	1990
Cost			
Capital	26,866,208,000	25,845,853,000	25,584,541,000
Labor	18,669,882,000	18,647,357,000	18,998,366,000
MRS	14,492,320,000	16,093,355,000	16,614,863,000
TOTAL	60,028,410,000	60,586,565,000	61,197,770,000
		0.93%	1.00%
Average of Shares			
Capital		0.3245	0.2881
Labor		0.2814	0.2832
MRS		0.3941	0.4287
		1.00	1.00
Quantity Growth			
Capital		4.84%	2.94%
Labor		-1.33%	-3.94%
MRS		-1.78%	12.29%
Total Input Quantity		0.50%	5.00%
Price Growth			
Capital		-8.71%	-3.96%
Labor		1.20%	5.80%
MRS		12.26%	-9.10%
Total Input Price		0.43%	-4.00%

02/11/97 02:54 PM

COMPARE2.WK4

TFPRP- Rev=Cost

Interstate Access

TFPRP-7	1988	1989	1990
Intrastate Access	1.0000	1.0017	0.9840
Toll	1.0000	0.9839	0.9662
Interstate End User	1.0000	1.1785	1.2256
Interstate Switched	1.0000	0.8567	0.7518
Interstate Special	1.0000	0.9237	0.9139
Miscellaneous	1.0000	1.0450	1.0924

Quantity Indexes

Local	318724185	330212045	342403841
Intrastate Access	0	0	0
Toll	61828434	67174808	74183251
Interstate Access	1.3345	1.4710	1.5963

Miscellaneous	0	0	0
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Quantity Growth	1988	1989	1990
Local		3.54%	3.63%
Intrastate Access		0	0
Toll		8.29%	9.92%
Interstate Access		9.74%	8.18%
		0.00%	0.00%
		0.00%	0.00%
Miscellaneous		0	0
TOTAL OUTPUT		6.34%	6.34%

02/11/97 02:54 PM

COMPARE2.WK4

**TFPRP- Rev=Cost
Interstate Access**

TFPRP-7	1988	1989	1990
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OUTPUT

TFPRP-7	1988	1989	1990
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BOOKED REVENUES

Local	29,226,988,000	29,973,157,000	30,699,085,000
Intrastate Access	4,326,751,000	4,318,962,000	4,436,737,000
Toll	10,668,223,000	10,549,257,000	10,577,992,000
Interstate End User	3,604,221,000	4,398,692,000	4,679,142,000
Interstate Switched	9,662,529,000	9,092,575,000	8,595,750,000
Interstate Special	2,539,698,000	2,253,922,000	2,209,064,000
Miscellaneous	0	0	0

Total	60,028,410,000	60,586,565,000	61,197,770,000
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Average of Shares

Local	0.491	0.498
Intrastate Access	0.000	0.000
Toll	0.248	0.245
Interstate Access	0.262	0.256
	0.000	0.000
	0.000	0.000
Miscellaneous	0.000	0.000

Total	1.000	1.000
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Price Indexes

Local	1.0000	0.9754	0.9472
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02/11/97 02:54 PM

COMPARE2.WK4

TFPRP- Rev=Cost

Interstate Access

TFPRP-7	1988	1989	1990
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TFP AND X FACTOR

Interstate Access

TFP Growth		5.84%	1.34%
US TFP Growth		-0.26%	-0.21%
TFP Differential		6.10%	1.55%

Input Price Growth		0.43%	-4.00%
US Input Price Growth		4.14%	4.22%
Input Price Differential		-3.71%	-8.22%

X Factor		9.81%	9.77%
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Summary

	1988-94 Interstate Access	1988-94 Local & Toll	1988-94 Difference
Total Output	5.3%	4.8%	0.6%
Total Input	0.9%	0.9%	0.0%
LEC TFP	4.4%	3.8%	0.6%
TFP Differential	4.2%	3.6%	0.6%
LEC Input Price	1.0%	1.0%	0.0%
Input Price Differential	-2.8%	-2.8%	0.0%
X Factor	7.0%	6.5%	0.6%

Use Nonfarm Business MFP and Input Price Growth

	1988	1989	1990
TFP Growth		5.84%	1.34%

02/11/97 02:54 PM

COMPARE2.WK4

**TFPRP- Rev=Cost
Interstate Access**

TFPRP-7	1988	1989	1990
US TFP Growth		-0.55%	-0.47%
TFP Differential		6.39%	1.81%
Input Price Growth		0.43%	-4.00%
US Input Price Growth		3.04%	3.31%
Input Price Differential		-2.61%	-7.31%
X Factor		9.00%	9.12%

**Difference using Nonfarm Business MFP and Input Price Growth
1988-94**

TFP Differential	0.2%	0.1%
Input Price Differential	0.7%	0.6%
X Factor	-0.5%	-0.5%

02/11/97 02:54 PM

COMPARE2.WK4

**TFPRP- Rev=Cost
Interstate Access**

TFPRP-7	1991	1992	1993	1994	Avg 88-94	Avg 89-94
Cost						
Capital	24,641,357,000	26,477,138,000	26,858,104,000	26,303,835,000		
Labor	19,576,237,000	19,862,205,000	21,027,726,000	21,625,328,000		
MRS	17,825,034,000	17,013,535,000	17,551,114,000	19,286,027,000		
TOTAL	62,042,628,000	63,352,878,000	65,436,944,000	67,215,190,000		
	1.37%	2.09%	3.24%	2.68%	1.9%	2.1%
Average of Shares						
Capital	0.2469	0.2486	0.2701	0.2768		
Labor	0.2829	0.2746	0.2726	0.2648		
MRS	0.4702	0.4768	0.4573	0.4584		
	1.00	1.00	1.00	1.00		
Quantity Growth						
Capital	3.32%	2.83%	2.84%	2.67%	3.2%	2.9%
Labor	-6.66%	-1.27%	-4.02%	-7.56%	-4.1%	-4.7%
MRS	2.88%	-0.94%	-5.29%	8.37%	2.6%	3.5%
Total Input Quantity	0.29%	-0.09%	-2.75%	2.57%	0.9%	1.0%
Price Growth						
Capital	-7.07%	4.35%	-1.41%	-4.76%	-3.6%	-2.6%
Labor	9.66%	2.72%	9.72%	10.36%	6.6%	7.7%
MRS	4.15%	-3.72%	8.41%	1.06%	2.2%	0.2%
Total Input Price	1.08%	2.18%	5.99%	0.11%	1.0%	1.1%

02/11/97 02:54 PM

COMPARE2 WK4

**TFPRP- Rev=Cost
Interstate Access**

TFPRP-7 OUTPUT	1991	1992	1993	1994	Avg 88-94	Avg 89-94
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TFPRP-7 BOOKED REVENUES	1991	1992	1993	1994	Avg 88-94	Avg 89-94
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Local	32,059,008,000	33,359,990,000	34,598,957,000	35,758,637,000		
Intrastate Access	4,456,237,000	4,506,685,000	4,647,675,000	4,829,192,000		
Toll	10,066,039,000	9,718,496,000	9,849,156,000	9,526,791,000		
Interstate End User	4,828,177,000	4,963,262,000	5,244,094,000	5,589,662,000		
Interstate Switched	8,514,130,000	8,650,880,000	8,999,065,000	9,293,783,000		
Interstate Special	2,119,037,000	2,153,565,000	2,097,997,000	2,217,125,000		
Miscellaneous	0	0	0	0		
Total	62,042,628,000	63,352,878,000	65,436,944,000	67,215,190,000		

Average of Shares

Local	0.509	0.522	0.528	0.530
Intrastate Access	0.000	0.000	0.000	0.000
Toll	0.240	0.229	0.223	0.218
Interstate Access	0.251	0.249	0.249	0.252
	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000
Miscellaneous	0.000	0.000	0.000	0.000
Total	1.000	1.000	1.000	1.000

Price Indexes

Local	0.9510	0.9486	0.9468	0.9377
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02/11/97 02:54 PM

COMPARE2.WK4

TFPRP- Rev=Cost

Interstate Access

TFPRP-7	1991	1992	1993	1994	Avg 88-94	Avg 89-94
Intrastate Access	0.9271	0.9067	0.8803	0.8459		
Toll	0.9350	0.9189	0.9031	0.8881		
Interstate End User	1.2231	1.2385	1.2709	1.3183		
Interstate Switched	0.7060	0.6772	0.6698	0.6433		
Interstate Special	0.9377	0.9342	0.8759	0.8252		
Miscellaneous	1.1364	1.1724	1.2073	1.2403		

Quantity Indexes

Local	353219571	365468629	376995406	392601075		
Intrastate Access	0	0	0	0		
Toll	79543260	82259907	89192259	97553610		
Interstate Access	1.6686	1.7732	1.8835	2.0179		

Miscellaneous	0	0	0	0		
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Quantity Growth	1991	1992	1993	1994	Avg 88-94	Avg 89-94
Local	3.11%	3.41%	3.11%	4.06%	3.5%	3.5%
Intrastate Access	0	0	0	0	0.0%	0.0%
Toll	6.98%	3.36%	8.09%	8.96%	7.6%	7.5%
Interstate Access	4.43%	6.08%	6.03%	6.89%	6.9%	6.3%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Miscellaneous	0	0	0	0	0	0.0%
TOTAL OUTPUT	4.37%	4.06%	4.95%	5.84%	5.3%	5.1%

02/11/97 02:54 PM

COMPARE2.WK4

TFPRP- Rev=Cost

Interstate Access

TFPRP-7	1991	1992	1993	1994	Avg 88-94	Avg 89-94
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TFP AND X FACTOR

Interstate Access

	1991	1992	1993	1994	Avg 88-94	Avg 89-94
TFP Growth	4.08%	4.15%	7.70%	3.26%	4.4%	4.1%
US TFP Growth	-1.04%	1.49%	0.62%	0.60%	0.2%	0.3%
TFP Differential	5.12%	2.67%	7.08%	2.66%	4.2%	3.8%
Input Price Growth	1.08%	2.18%	5.99%	0.11%	1.0%	1.1%
US Input Price Growth	2.91%	4.61%	3.55%	3.29%	3.8%	3.7%
Input Price Differential	-1.83%	-2.43%	2.44%	-3.19%	-2.8%	-2.6%
X Factor	6.95%	5.10%	4.64%	5.85%	7.0%	6.5%

Summary

	1989-94 Interstate Access	1989-94 Local & Toll	1989-94 Difference
Total Output	5.1%	4.6%	0.5%
Total Input	1.0%	1.0%	0.0%
LEC TFP	4.1%	3.6%	0.5%
TFP Differential	3.8%	3.3%	0.5%
LEC Input Price	1.1%	1.1%	0.0%
Input Price Differential	-2.6%	-2.6%	0.0%
X Factor	6.5%	6.0%	0.5%

Use Nonfarm Busines

	1991	1992	1993	1994	Avg 88-94	Avg 89-94
TFP Growth	4.08%	4.15%	7.70%	3.26%	4.4%	4.1%

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TFPRP- Rev=Cost

Interstate Access

TFPRP-7	1991	1992	1993	1994	Avg 88-94	Avg 89-94
US TFP Growth	-0.89%	1.10%	0.55%	0.50%	0.0%	0.2%
TFP Differential	4.97%	3.05%	7.15%	2.76%	4.4%	3.9%
Input Price Growth	1.08%	2.18%	5.99%	0.11%	1.0%	1.1%
US Input Price Growth	2.06%	2.88%	3.72%	3.50%	3.1%	3.1%
Input Price Differential	-0.98%	-0.70%	2.27%	-3.39%	-2.1%	-2.0%
X Factor	5.95%	3.75%	4.88%	6.16%	6.5%	6.0%

Difference using Nonf

TFP Differential

Input Price Differential

X Factor

ATTACHMENT 12

**“The TFPRP Provides the Best Basis for
Determining the Rate of LEC TFP Growth”**

**Laurits R. Christensen, Philip E. Schoech and
Márk E. Meitzen**

**USTA Reply Comments
CC Docket No. 96-262
February 14, 1997**

The TFPRP Provides the Best Basis for Determining the Rate of LEC TFP Growth

Laurits R. Christensen, Philip E. Schoech, and Mark E. Meitzen
February 14, 1997

In our report "Updated Results for the Simplified TFPRP Model and Response to Productivity Questions in FCC's Access Reform Proceeding" (hereafter referred to as "Updated Results") we presented updated results for the Simplified Total Factor Productivity Review plan (TFPRP). Those updated results show that over the 1990-1995 period, the difference between LEC TFP growth and economy-wide TFP growth has averaged 2.7% per year. We also presented evidence that the future rate of LEC TFP growth is likely to be lower. The lower TFP growth will be due to planned ILEC rate structure changes and the expected effects of competition on ILEC output growth. Our second report, "Critique of the AT&T Performance-Based Model," provides a detailed evaluation of the AT&T model. That critique identifies a number of fundamental errors in the AT&T model, and it shows that when the errors are corrected, the AT&T model produces the same results as the TFPRP.

None of the comments filed by the other parties, including comments filed by AT&T, MCI, and AdHoc, have provided any evidence that invalidates the results of the TFPRP model. Furthermore, no evidence was submitted that invalidates any part of our critique of the AT&T model. Finally, no evidence was submitted to invalidate our conclusion that ILEC rate restructuring and lost output growth caused by competition will reduce the rate of LEC TFP growth.

AT&T puts forth two reasons for falsely claiming that the future rate of

LEC TFP growth is likely to be higher. The first reason given by AT&T is based on their proposal that subscriber line charges be removed from price caps. If subscriber line charges were removed, per minute charges would account for a larger fraction of the revenue remaining under the interstate access price cap. AT&T incorrectly asserts that this implies an increase in interstate productivity growth. AT&T draws this false conclusion because it relies on the fatally flawed methods AT&T employed in calculating "interstate productivity."

The interstate productivity measure was put together by comparing the growth in interstate output to the growth in Total Input. In our reply comments filed March 1, 1996, as well as in our critique of the AT&T model that we filed on January 29, 1997, we explained why such an interstate productivity measure is economically meaningless. In asserting that interstate productivity would increase after restructuring, AT&T extends this faulty logic to compare the growth in interstate minutes of use to the growth in Total Input. In the past, interstate minutes of use have grown more rapidly than access lines. AT&T wrongly uses this fact to conclude that interstate productivity growth will increase under restructuring.

As we documented in "Updated Results" the actual impact of restructuring will be to reduce the rate of TFP growth. This is because restructuring will reduce the interstate revenue collected from minutes of use charges. This in turn will reduce the weight of interstate minutes of use in Total Output. Since interstate minutes of use have grown more rapidly than other outputs, reducing the weight for interstate minutes of use will reduce the rate of Total Output

growth and the rate of TFP growth.

The second reason given by AT&T for falsely claiming future LEC TFP growth will be higher is that restructuring will stimulate increases in interstate minutes of use, leading to an increase in LEC TFP. The assertion that LEC minutes of use will increase is not supported by any quantitative evidence, but even with optimistic projections of minutes of use growth, the impact on TFP will be small. Historically, LEC interstate minutes of use have grown approximately seven percent per year. Suppose for a moment that this growth rate increases to ten percent per year (i.e. the growth rate increases by nearly half again as much). Under restructuring, tariffs based on interstate minutes of use will account for approximately 12 percent of total revenue. Thus, this hypothetical three percentage point increase in interstate minutes of use would translate into a .36 percentage point increase in Total Output. As we stated in "Updated Results", each one percentage point increase in Total Output growth will increase TFP growth between .3 and .5 percentage points. This means that the hypothetical three percentage point increase in interstate minutes of use will translate into a .11 to .18 percentage point increase in TFP. This optimistic hypothetical projection of the impact of interstate minutes of use growth on TFP growth is small relative to the reductions in TFP growth that are likely to result from lost output growth due to competition for this and other services.

In conclusion, the TFPRP provides the best evidence available on LEC TFP growth. The planned ILEC rate structure changes will reduce the future rate of LEC TFP growth. Furthermore the effect of competition on LEC output growth

is likely to further reduce the rate of LEC TFP growth. None of the comments filed in this proceeding undermine the TFPRP model. Nor do the comments filed, including those of AT&T, invalidate our conclusions regarding the future rate of LEC TFP growth.

Attachment 13

Statement of Dr. Randall S. Billingsley

**USTA Reply Comments
CC Docket No. 96-262
February 14, 1997**